

*a4*  
cnt.

3. (Amended) The light tube of claim 2 wherein each of the pair of end caps is an electrical bi-pin connector.

*b1*

- Sub B1* 5. (Amended) In a replacement light tube for a flourescent light fixture having

a light tube socket and a power supply circuit, the improvement comprising:  
a plurality of closely-spaced light emitting diodes disposed inside a bulb portion of the light tube and in electrical communication with a pair of end caps coupled to opposed ends of the bulb portion and engageable with the light tube socket, the plurality of light emitting diodes operable to illuminate in response to electrical current delivered by the flourescent light fixture.

*AB*

*CNT*

6. (Amended) The improvement of claim 5 wherein the plurality of light emitting diodes is mounted to a circuit board.

7. (Amended) The improvement of claim 6 wherein each of the plurality of light emitting diodes is mounted at an angular off-set from the circuit board to establish a predetermined radiation pattern of light.

- Sub B2* 8. (New) The light tube of claim 1 wherein the plurality of light emitting diodes is mounted on at least one circuit board.

*AB*

9. (New) The light tube of claim 8 wherein the plurality of light emitting diodes is mounted on only one side of the at least one circuit board to emit light toward only one side of the bulb portion.

10. (New) The light tube of claim 9 wherein the radiation pattern of light from each of the plurality of light emitting diodes is centered at a 90° angle relative to the at least one circuit board.

11. (New) The light tube of claim 1 wherein each of the plurality of light

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emitting diodes is a white LED.

12. (New) The light tube of claim 1, wherein the plurality of light emitting diodes is displaced substantially continuously between the opposite ends of the bulb portion.

13. (New) The light tube of claim 1 wherein each of the plurality of light emitting diodes is arranged into one of a plurality of equidistantly-spaced light emitting diode banks, each of the plurality of light emitting diode banks comprising at least two light emitting diodes.

*B1*  
*GK*  
*Cut.*  
14. (New) The improvement of claim 5 wherein the bulb portion is annular.

15. (New) The improvement of claim 5 wherein the electric current is a direct current signal, the improvement further comprising:

a rectifier for converting an alternating current signal from the fluorescent light fixture to the direct current signal.

16. (New) The improvement of claim 15, further comprising:  
a pulse-width modulating circuit for receiving the direct current signal and supplying a resulting modulated signal to the plurality of light emitting diodes.

17. (New) The improvement of claim 5 wherein each of the plurality of light emitting diodes is a white LED.

18. (New) The improvement of claim 5 wherein each of the plurality of light emitting diodes is arranged into one of a plurality of equidistantly-spaced light emitting diode banks, each of the plurality of light emitting diode banks comprising at least two light emitting diodes.

B1  
OTC  
Cm

19. (New) The improvement of claim 6 wherein the plurality of light emitting diodes is mounted on only one side of the circuit board to emit light toward only one side of the bulb portion.

19. (New) The improvement of claim 19 wherein the radiation pattern of light from each of the plurality of light emitting diodes is centered at a 90° angle relative to the circuit board.